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EXAMINER	
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ART UNIT	PAPER NUMBER
3689	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,505	WOLLENBERG, PEER W	
	Examiner	Art Unit	
	HEIDI RIVIERE	3689	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 14-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The use of the trademark CARI-6 has been noted in both the specification and the drawings of this application. However, the notation of the trademark in paragraph 25 although capitalized it should also be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 3** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 3 contains the trademark/trade name "CARI". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See Ex parte Simpson, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of

goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe "the calculation of the radiation dose performed by using a three-dimensional network dividing the airspace in longitude, latitude and altitude" and, accordingly, the identification/description is indefinite.

Further more an equivalent system to the CARI is not clearly defined as the CARI system is not defined. Therefore the limitation is interpreted as limited to any dose calculating system using longitude, latitude and altitude.

5. Claim 5 recites the limitation "calculations are performed as follows" in the preamble, thus alluding that this is according to claim 1. There is insufficient antecedent basis for this limitation in the claim. Claim 1 does not mention calculations.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. **Claim 1-10 and 14-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

8. **Claims 1-10 and 14-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims on a whole encompass a human being. For example, Claim 1 states "wherein the input of the data is performed by the person" and "wherein the person obtains access to the central

computer". If the broadest reasonable interpretation of the claimed invention as a whole encompasses a human being, then a rejection under 35 U.S.C. 101 must be made indicating that the claimed invention is directed to nonstatutory subject matter. The claims also appear to be mixing both distinct statutory classes of invention of an apparatus and a method in one single claim, which renders the claims as non-statutory as well.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 1, 6-11 and 16-20** are rejected under 35 U.S.C. 102(b) as being anticipated by **Lilly (US 2002/0103865 A1**).

11. **With respect to claims 1 and 11:** (currently amended) Lilly teaches a system for electronic registration of logbooks for a number of persons in connection with air travel, which system comprises a central computer for the registration and the processing of electronic data representing an individual person's logbook and one or more terminals for the input of the electronic data in question, wherein the data input into the central computer regarding a specific flight performed by a person comprises: (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot computer to enter data related to personnel information in ilogbook)

- information on the identity of the person, information on the flight number, information on the time of departure and arrival and consequently the flying time as well as the places of departure and arrival of the flight, information on the status of specific persons during the flight, (Lilly: Figs. 17a, 17b, 19a and 19b- pilot name, flight information; departure and arrival location)

wherein the input of the data is performed by the person in question in a process comprising two steps, the first step comprising the input of the data into the terminal and control of the data in question, including correction of any erroneously input data, if any, and the second step comprising a permanent storing and data processing of the data in question in the computer, the permanent storing preventing a subsequent correction of any of the input data, wherein the input of data in the computer in the second step is performed in a process where access to the computer is only obtained by positive verification of conformity between the identity of the person and a personal code word or password, wherein the person obtains access to the central computer for the output of data regarding the person in question by using said personal code word or password, [[i.e.]] for the reading of the person's personal logbook, and wherein an authority, obtains access to data contained in the computer regarding a specific person by using a specific first code, and obtains access to the data in the computer regarding a specific aircraft's flights by using a second code. (Lilly: Figs. 17b, 19A and 26C; paragraphs 145-149 – passwords and unique user identification; first user inputs and edits information while second user has the ability to view information; information stored on device;

system can be searched aircraft make and model information entered and is searchable)

12. **With respect to claims 6 and 16:** (currently amended) Lilly teaches the individual terminal is constituted by a computer unit selected from the group consisting of at least one of or in particular a PC with a control program for the execution of the input procedure an electronic data registration device connected to a global computer network for the input of the data into the central computer via the global computer network. (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot's computer to enter data in ilogbook; network of computers linked via the Internet)

13. **With respect to claims 7 and 17:** (currently amended Lilly teaches the data input into the central computer further comprise information regarding a possible flight in the dark, in fog or other weather with low visibility (IFR), and furthermore information on whether the flight can be characterized as "Cross-Country" and also any information or remarks of technical matters during the flight. (Lilly: Figs. 12a-12d, 17b, 19A and 26C; paragraphs 145-149 – remarks regarding flight in additional details sections; nighttime flight information; cross country flight information;)

14. **With respect to claims 8 and 18:** (currently amended) Lilly teaches the electronic data input into the central computer further comprise data regarding the specific aircraft. (Lilly: Figs. 12a-12d, 17b, 19A and 26C; paragraphs 145-149 – aircraft identifying information, for example, make and model, tail, engine etc.)

15. **With respect to claims 9 and 19:** (currently amended) Lilly teaches the data regarding the specific aircraft when entering said second code are made available for

the reading by an airline or an aviation authority. (Lilly: Figs. 1, 17b, 19A and 26C; paragraphs 145-149 – passwords and unique user identification; second user (FAA, FBI or INS) has the ability to view information; information stored on device; system can be searched aircraft make and model information entered and is searchable)

16. **With respect to claims 10 and 20:** (currently amended) Lilly teaches the central computer when reading the person's logbook adds an authenticity code to the printout, which authenticity code is generated on the basis of data regarding the person, including the person's date of birth and the complete flying time and the date and hour of the printout, as this authenticity code when using a decryption programme is decrypted by the aviation authorities in order to prove the authenticity of the printout. (Lilly: paragraphs 12a-12d, 13a, 16c, 17a and 149-150 – printout includes information to user and user authorized entities; user personal information associated with the information as well as the ilogbook trademark)

Furthermore, the data identifying "information used in the authenticity code" is non-functional descriptive data.

When presented with a claim comprising descriptive material, an Examiner must determine whether the claimed nonfunctional descriptive material should be given patentable weight. The Patent and Trademark Office (PTO) must consider all claim limitations when determining patentability of an invention over the prior art. *In re Gulack,* 703 F.2d 1381, 1385, 217 USPQ 401,404 (Fed. Cir. 1983). The PTO may not disregard claim limitations comprised of printed matter. *See Gulack,* 703 F.2d at 1384-85,217 USPQ at 403; *see also Diamond v. Diehr,* 450 U.S. 175, 191,209 USPQ 1, 10 (1981).

However, the examiner need not give patentable weight to descriptive material absent a new and unobvious functional relationship between the descriptive material and the subset. See *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994); *In re Ngai*, 367 F.3d 1336, 1338, 70 USPQ2d 1862, 1863-64 (Fed. Cir. 2004). Thus, when the prior art describes all the claimed structural and functional relationships between the descriptive material and the subset, but the prior art describes a different descriptive material than the claim, then the descriptive material is nonfunctional and will not be given any patentable weight. That is, such a scenario presents no new and unobvious functional relationship between the descriptive material and the subset.

The Examiner asserts that the data identifying "information used in the authenticity code" adds little, if anything, to the claimed acts or steps and thus do no serve as limitations on the claims to distinguish over the prior art. MPEP 2106IV b 1(b) indicates that "nonfunctional descriptive material" is material "that cannot exhibit any functional interrelationship with the way the steps are performed". Any differences related merely to the meaning and information conveyed through data, which does not explicitly alter or impact the steps is non-functional descriptive data. The subjective interpretation of the data does not patentably distinguish the claimed invention.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. **Claims 2-5, 12, 14 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lilly** in view of **Duftschmid et al. (US 5/841,142)** (hereinafter "**Duftschmid**").

19. **With respect to claims 2 and 12:** (currently amended) Lilly teaches a system for the electronic registration of cosmic radiation dose for a person performing a flight, which system comprises a central computer for the registration and the processing of electronic data representing the person's logbook and one or more terminals for the input of the electronic data in question, wherein the data input into the central computer for a flight performed by the person in question comprises: (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot computer to enter data in ilogbook)

- information on the identity of the specific person, information on the date of the flight, information on the flight number, information on the time of departure and arrival and consequently the duration of the flight, as well as the places of departure and arrival, (Lilly: Figs. 17a, 17b, 19a and 19b- pilot name, flight information; departure and arrival location)

wherein the input of the data is performed by the person in question in a process comprising two steps, the first step comprising the input of the data into the terminal and control of the data in question, including any correction of erroneously input data if necessary, (Lilly: Figs. 1, 5 and 7; paragraphs 41-42, 122; pilot computer to enter data in ilogbook) and

wherein the input of the data into the computer in the second step is performed in a process where the access to the computer is only obtained by positive verification of conformity between the identity of the person and a personal code word or password, and wherein the person obtains access to the central computer for the output of data regarding the person in question by using said personal code word or password. (Lilly: Figs. 17b, 19A and 26C; paragraphs 145-149 – passwords and unique user identification; first user inputs and edits information while second user has the ability to view information; information stored on device; system can be searched aircraft make and model information entered and is searchable)

Lilly does not teach, however Duftschmid teaches the second step comprising the calculation of the radiation dose and a permanent storing of the data in question in the computer, the permanent storing preventing a possible subsequent correction of any of the input data, (Duftschmid: col. 3, lines 10-65, col. 4, lines 1-67 – measurement process consists of longitude, latitude and altitude data; system determines radiation dosage)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times

and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

20. **With respect to claim 3:** (currently amended) Lilly teaches the limitations cited in the rejections above. Lilly does not teach, however Duftschmid teaches the calculation of the radiation dose is performed by using a three-dimensional network dividing the airspace in longitude, latitude and altitude and by using the program called CARI-developed by FAA's Civil Aerospace Medical, or an equivalent dose calculation program. (Duftschmid: col. 3, lines 10-65, col. 4, lines 1-67 – measurement process consists of longitude, latitude and altitude data; system determines radiation dosage)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of biomedical data, see Fig. 1 of Lilly. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

21. **With respect to claims 4 and 14:** (currently amended) Lilly teaches the limitations cited in the rejections above. Lilly does not teach, however Duftschmid teaches the system further comprises a GPS unit, which, for the person or for all the persons of an aircraft, carries out a calculation of the person's or the aircraft's position, either continuously or periodically in relation to the longitude, the latitude and the

altitude. (Duftschmid: col. 3, lines 35-55, col. 4, lines 15-45 – measurement of radiation exposure accomplished using a GPS-system)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of flight related data to calculate time of flight and notes the departure and arrival location. Duftschmid states a GPS can be used to plot flight information and to help in the necessary calculations for radiation.

22. **With respect to claims 5 and 15:** (currently amended) Lilly teaches logging flight departure and arrival location as well as flight time and:

- 7.) the time of sunrise and sunset in the point in question is calculated, and it is subsequently decided whether the latest minute of flying is to be characterized as "Flying time day" or "Flying time night"; 10.) For pilots, the flying time, when on service, is summed up including accumulated "Flying time day" and accumulated "Flying time night"; (Lilly; Figs, 13a-13c, 15, 16c and 17a, col. 6, lines 1-67 – flying time total includes night flying time; night flying time listed separate from total in figures)

Lilly does not teach, however Duftschmid teaches:

- 1.) a great circle arc is created between the airport of departure and the airport of arrival; 2.) the arc is divided in a number of pieces which correspond to the same number of minutes of the flight; 3.) the position and altitude are calculated according to each point of the great circle arc; 4.) the radiation per hour is calculated in the reference point with a neutron

counting number of the time by means of the function with, where the relevant constants are selected from the calculated altitude of the aircraft at the time in question; 5.) the radiation power is corrected to the calculated position by getting the quotient for the actual position/altitude from the position database, and multiplying the radiation power of the reference point with the quotient[[.]]; 6.) the radiation dose is calculated as 1/60 of the result from step 5; (Duftschmid: col. 2, col. 3, line 10- col.4, line 67 - the calculation process involves "measuring at least one of the altitude and geographic location of the airplane"; "portion (contribution) factor is calculated which indicates the contribution of the neutron radiation ...of the cosmic radiation for the total effective equivalent dosage; geographic location of plane measured with GPS system; radiation measured in value of exposure per hour)

- 8.) when the above steps are done for each of the many points of the route, the partial doses are summed up to the whole of the dose of the flight; 9.) the dose of the flight is distributed to each crew member listed on a crew list; 11.) For a pilot who has been on board as a passenger (passive transfer), only the radiation columns are summed up; and 12.) For all others (flight crew members and passengers), all the columns are summed up. (Duftschmid: col. 5, lines 40-48 - "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times

and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Lilly and Duftschmid. Lilly teaches the storing and input of flight and pilot, flyer or flight related data. Lilly also teaches the input of flight and personnel related information within the system. Duftschmid teaches a process of determining radiation exposure during flight and creating a report with this data. Duftschmid states (col. 5, lines 40-48) "the computer can include a memory device for the storage of the dosage values in real time, so that the total actual radiation exposure for the flight can be scanned at all times and as a result of the flight plans can be coordinated electronic data-wise according to the respective flight personnel.")

CONCLUSION

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heidi Riviere whose telephone number is 571-270-1831. The examiner can normally be reached on Monday-Friday 9:00am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janice Mooneyham can be reached on 571-272-6805. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. R./
Examiner, Art Unit 3689

/Dennis Ruhl/
Primary Examiner, Art Unit 3689